



Reef Research--Grassroots Style

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Have you ever wondered what that was that just swam past your mask? Does the diversity and beauty of the Keys' fish species intrigue you? Have you ever asked yourself how one individual, such as yourself, could make a difference in protecting our amazing coral reef ecosystem? If you answered yes, or even maybe, to just one of these questions, consider yourself a prime candidate for free membership in R.E.E.F. - the Reef Environmental Education Foundation.

"Standard diving instruction teaches a student everything but what they are there to see in the first place," says Laddie Akins, the director of R.E.E.F. "R.E.E.F. teaches divers about what they are seeing. Subsequently, they stay in the sport and become advocates for protecting the resources."

R.E.E.F. is a non-profit organization based in Key Largo that officially began in 1990, though the idea and need for such an organization was identified much earlier. When world-renowned photographer, Paul Humann, was compiling information for his fish identification guide in the 1980's, he was dismayed at the lack of scientific information on the range and abundance of the over 500 species of fish found throughout the Caribbean, Florida, and Bahamas. The many goals of this grassroots effort include conducting volunteer surveys of marine life and making the collected data available to resource managers and marine scientists. A systematic effort of well trained volunteers can gather data that is broad in geographical scope and which covers a large time period. The data offers scientists a glance at spatial and temporal changes in populations that they would not have had the time nor resources to study themselves. To date over 11,000 fish surveys have been completed and returned to R.E.E.F., and the number is increasing every day.

Perhaps the largest, and certainly the most well-publicized, effort of R.E.E.F.'s is their partnership in the Great American Fish Count (GAFC), an annual census of reef fish which this year stretched throughout the Caribbean, Gulf of Mexico, and to the Pacific Coast in California. In addition to the GAFC, R.E.E.F. is involved in surveying fish populations in various Caribbean locations through week-long field survey trips. They are also one of the lead organizations in Level III monitoring of the no-take zones in the Florida Keys National Marine Sanctuary. Thirteen zoned sites and reference areas were selected this fall



Volunteers for R.E.E.F. collect data on fish populations by conducting reef fish surveys in the Florida Keys National Marine Sanctuary.

for gathering fish species and abundance data. "The data collected by Level III volunteer monitoring programs will help verify the results from Level I and II programs, and will help determine where additional monitoring should occur," explained Ben Haskell, Sanctuary science coordinator.

Where does the vast array of numbers collected worldwide by the more than 9000 R.E.E.F. members go? The cumbersome task of data management begins at R.E.E.F. headquarters in Key Largo. All of the census data is reviewed manually before being shipped off to The Nature Conservancy's University of Miami center to be scanned into a computer. This raw data is then downloaded onto the R.E.E.F. computer and processed by a program designed to organize large numerical data sets.

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R.E.E.F. volunteers learn to identify blue tang and the many other reef fish within Sanctuary waters.

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The end result of this tedious but vital process is the availability of organized, synthesized data to researchers, managers, and the general public on the Internet. The possibilities seem endless when it comes to what you can find out from the data available: Which fish are most abundant? How have populations changed over time? Which species are found only in a certain area? All of these questions and more can be answered due to the comprehensive collection of field data by trained R.E.E.F. volunteers. Visit the data yourself on the R.E.E.F. website at www.reef.org.

When asked about what the future holds for R.E.E.F., Laddie Akins is quick to respond. "We need to work even harder on raising public awareness," he states.

One of R.E.E.F.'s plans for reaching the community is to offer educational and informative programs and lectures about a variety of marine topics, from coral spawning to fish behavior. Audiences for these presentations are as varied as the subjects, and include school groups, visiting eco-tourists, dive shop customers, and trade show participants. The R.E.E.F. office in Key Largo also has an abundance of fun, educational materials that the general public may peruse, including the fish count database, a computerized "fish quiz" and other learning games, and a research library.

Perhaps the best part of joining R.E.E.F. is knowing that you will be part of a worldwide organization of divers and non-divers who are active stewards in the conservation of coral reef ecosystems. For more information or to join, you may call, write, fax, or e-mail R.E.E.F. with your name, address, and phone number. Or, check out their website at: www.reef.org. Membership is free, and with over 9000 members worldwide, R.E.E.F. has demonstrated itself to be an effective and diverse marine conservation organization.

"Once people learn about what they are seeing in our unique and intricate marine environment, they will want to protect it," Laddie summarized. And R.E.E.F. members are doing just that.

For more information about REEF, visit: **www.reef.org** (The Great American Fish Count is now known as the Great Annual Fish Count. For more information, visit: **www.fishcount.org**.)

Note: This article appeared in Winter 1998 issue of the newsletter of the Florida Keys National Marine Sanctuary. For more information, visit: floridakeys.noaa.gov.